

PATENT COOPERATION TREATY

From the:
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

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0 8 JUN 2005

RECEIVED

PCT WRITTEN OPINION (PCT Rule 66)

Date of mailing
(day/month/year) - 3 JUN 2005

Applicant's or agent's file reference
FP1911

REPLY DUE within **TWO MONTHS**
from the above date of mailing

International Application No.
PCT/SG2003/000284

International Filing Date (day/month/year)
12 December 2003

Priority Date (day/month/year)
12 December 2003

International Patent Classification (IPC) or both national classification and IPC
Int. Cl. ⁷ G06T 7/60, G06K 9/46

DUE DATE

Applicant
AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH et al

3 / 8 / 05
ENTERED

1. This written opinion is the **first** drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The **FINAL DATE** by which the international preliminary examination report must be established according to Rule 69.2 is:
12 April 2006

4. The applicant is hereby invited to reply to this opinion.

When? See the Reply Due date indicated above. However, the Australian Patent Office will not establish the Report before the earlier of (i) a response being filed, or (ii) one month before the Final Date by which the international preliminary examination report must be established. The Report will take into account any response (including amendments) filed before the Report is established. If no response is filed by 1 month before the Final Date, the international preliminary examination report will be established on the basis of this opinion.
Applicants wishing to have the benefit of a further opinion (if needed) before the report is established should ensure that a response is filed at least 3 months before the Final Date by which the international preliminary examination report must be established.

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3.
For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.
For an informal communication with the examiner, see Rule 66.6.

Name and mailing address of the IPEA/AU
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Authorized Officer

J.W. THOMSON

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I. Basis of the opinion

1. With regard to the elements of the international application:*
- ☒ the international application as originally filed.
- ☐ the description, pages , as originally filed,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the claims; pages , as originally filed,
 pages , as amended under Article 19,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the drawings, pages , as originally filed,
 pages , filed with the demand,
 pages , received on with the letter of
- ☐ the sequence listing part of the description:
 pages , as originally filed
 pages , filed with the demand
 pages , received on with the letter of
2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
 These elements were available or furnished to this Authority in the following language which is:
- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:
- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.
5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"

WRITTEN OPINION

International application No.

PCT/SG2003/000284

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement.

1. Statement

Novelty (N)	Claims	YES
	Claims 1-30	NO
Inventive step (IS)	Claims	YES
	Claims 1-30	NO
Industrial applicability (IA)	Claims 1-30	YES
	Claims	NO

2. Citations and explanations

The following new citation is relevant:

- Hu & Nowinski, *A rapid algorithm for robust and automatic extraction of the midsagittal plane of the human cerebrum from neuroimages based on local symmetry and outlier removal*, NeuroImage, December 2003, Volume 20, Issue 4, pp 2153-2165 (see the whole document, in particular pages 2153-2157)

The invention defined in claims 1-30 is not novel and lacks inventiveness when compared with the cited document that discloses all the essential features of the invention claimed.

Hu provides a complete disclosure of the invention as defined in claims 1-30, including a method for determining the location of the MSP by calculating the AFLSs and removing outlier AFLSs, with outlier AFLSs defined as having larger angular deviation from the MSP than the predetermined threshold and inlier AFLSs defined as having smaller angular deviation from the MSP; for the purposes of identifying pathology in a brain image, substantially as claimed.

The citation was available online from 14 November 2003, from whence it is considered to be in the public domain. Therefore the invention defined in claims 1-30 do not meet the requirements for Novelty and Inventive Step.